DOI: 10.1556/044.2020.00011



# A comparative study of reading comprehension skills among Hungarian students in Hungary and Slovakia

Ildikó Vančo<sup>1\*</sup> o and Viktória Gergelyová<sup>2</sup> o

### ORIGINAL RESEARCH PAPER

Received: August 17, 2020 • Accepted: September 29, 2020

Published online: February 16, 2021 © 2020 Akadémiai Kiadó, Budapest



### **ABSTRACT**

The present study aims to map the reading comprehension skills of the primary school students in Hungary and Slovakia and to see what differences there are in the reading habits, self-assessment and actual performance in reading comprehension between the two groups.

A total of 240 survey respondents from the two countries and belonging to two age groups participated in this phase of research. The survey consisted of two parts. The first part was a self-completed questionnaire consisting of 23 questions, in which the students' sociological background, language use, reading habits, and subjective opinions related to the assessment of reading comprehension skills were assessed. The second part was a reading comprehension test, which consisted of three sets of texts and questions adapted to the cognitive abilities of the two age groups.

An analysis of the answers shows that there is no significant difference between the self-evaluation of students in the two countries regarding their reading comprehension skills. There is however a difference between the reading habits of Hungarian students in Hungary vs. in Slovakia in both age groups, and a significant difference between the results of the reading comprehension test in the groups of students from the two countries.



<sup>&</sup>lt;sup>1</sup> Constantine the Philosopher University, Drážovská 4, 949 74 Nitra, Slovakia

<sup>&</sup>lt;sup>2</sup> Constantine the Philosopher University, Nitra, Slovakia

<sup>\*</sup> Corresponding author. E-mail: ivanco@ukf.sk

#### **KEYWORDS**

reading comprehension, Slovakia Hungarian students, reading habits, subjective self-evaluation of reading comprehension skills

### INTRODUCTION

Reading comprehension is among the most important areas of native language competence; it is one of the most essential pillars of today's society and a tool that can be regarded as the intellectual capital of society. Modern information-centered society requires citizens to effectively interpret various texts. Reading comprehension skills play a fundamental role in learning and are a prerequisite for any further learning and knowledge acquisition. Poor reading comprehension skills also have a negative impact on prosperity in different areas of life.

For these reasons, reading comprehension skills of students and adults are regularly measured by international surveys, with Hungary and Slovakia also participating. The two most significant international surveys conducted in regular cycles measuring students' reading comprehension skills are PIRLS (Progress in International Reading Literacy Study) and PISA (Programme for International Student Assessment). PIRLS assesses reading comprehension skills of fourth graders every five years. The results of the latest PIRLS survey conducted in 2016 show that the average performance of students in Hungary (544 points) was higher than the performance of students in Slovakia (535 points), and the performance of students in both countries was higher than the average international performance on PIRLS (500 points). Hungarian students' scores are higher and Slovak scores are lower than the average performance of EU countries (540 points) and the OECD average (541 points) (IEA). PISA assesses students' performance in three-year cycles. Based on the latest PISA results for 2018, the average reading comprehension score of Hungarian students is higher (476 points) than that of Slovak students (458 points), but the reading comprehension performance of students in both countries is significantly below the OECD average of 487 points (OECD, 2019, p. 17). The country results of these international surveys include, but do not specifically address, the results of national minorities living in the country. The largest minority group in Slovakia are Hungarians, and this minority has an extensive network of primary and secondary language schools using Hungarian as a language of instruction. Based on the available data, we can find out how many schools with Hungarian as the language of instruction in Slovakia participated in PIRLS, but the publicly available PIRLS and PISA databases do not provide data on the specific number and performance of minority students in particular.

Our research aims to provide a detailed overview of reading habits and to compare reading comprehension skills between Hungarian primary school students in Hungary vs. in Slovakia. The two populations attend a different number of Hungarian language and literature classes during their education. In addition, the Hungarian population in Hungary is monolingual, while the Hungarian students in Slovakia are characterized by different degrees of bilingualism in addition to their dominance of the Hungarian language. In other words, the linguistic environment of the Hungarian students in Hungary is monolingual Hungarian, while that of the Hungarian students in Slovakia is bilingual Hungarian and Slovak.



In this regard, the following research questions are addressed via our survey:

- 1. Is there a difference between the reading habits and reading comprehension skills based on subjective self-assessment of Hungarian students in Hungary vs. Slovakia?
- 2. Is there a significant difference between reading comprehension performance of Hungarian students in Hungary vs. Slovakia?

The results reported below are based on data from our pilot study. In our survey, we tested 10% of the fourth and seventh grade Hungarian students in Slovakia. The full survey and the creation of the database have been delayed due to the COVID-19 pandemic.

### METHODOLOGY

Our pilot study assessed the reading comprehension skills of a group each of Hungarian primary school pupils in Hungary and in Slovakia. The sample was selected based on purposive sampling, following the strategy of choosing respondents from the two countries and two age groups (fourth vs. seventh grade students). All the respondents attended public primary schools. Students in Hungary were all monolingual, while those in Slovakia were Hungarian-dominant students living in a Hungarian-majority region and attending primary schools with Hungarian as the language of instruction. The obtained data and their relationship were evaluated by statistical methods, using the IBM SPSS Statistics 25 statistical software package.

The survey is part of a comprehensive study. In its current phase the total number of survey respondents is 240: 120 from Hungary, with 80 fourth graders and 40 seventh graders, and 120 from Slovakia, with 44 fourth graders and 76 seventh graders. The number of respondents was calculated on the basis of the number of students in the given grades of the selected schools. Table 1 below summarizes the distribution of the respondents in the survey.

The study was a comparative cross-sectional survey conducted in May 2019, anonymously, and the students did not know about it before participating. The questionnaires were coded with numbers so that the data for each respondent could be traced. The survey consisted of two parts. The first part was a self-completed sociological questionnaire with 23 questions in which we assessed the respondents' social backgrounds, language use, reading habits, and their self-assessment of reading comprehension.

The questionnaire was immediately followed by a reading comprehension test that we designed to assess students' actual reading comprehension skills. The reading comprehension tests consisted of three texts and questions related to them. The same age groups received the same tests in both countries. The structure of the reading comprehension tests of the two age groups was similar: each test contained 3 different types of text as well as questions adapted to the cognitive abilities of each of the age groups. The tests of the fourth graders were dominated

**Table 1.** The distribution of the respondents

	4th Grade	7th Grade	Total
HU	80	40	120
SK	44	76	120
Total	124	116	240



by closed multiple choice questions, while the tests of the seventh graders mainly consisted of open-ended questions. Students were given an average of 90 minutes to complete the questionnaire and the tests in their Hungarian language classes. We were present in the classrooms throughout the survey, thus ensuring the authenticity of the data obtained.

As far as the memory load, the respondents worked continuously with the texts when answering the questions. During the survey, we specifically asked them not to answer questions from memory but to use the texts and to keep working with them. The answers obtained from the comprehension tests were evaluated by scoring: each correctly answered question earned one point, in order to allow us to process the data statistically. Answers were given one point only if they were completely correct.

### Social characteristics of respondents

The 240-person survey involved 120 Hungarian students from Hungary and 120 from Slovakia. Despite the random sample, the gender distribution was balanced in the two groups: 53% of the Hungary Hungarian respondents and 47% of the Slovakia Hungarian respondents were boys, while 48 and 52% of the respondents were girls, respectively. 80 Hungary Hungarian and 44 Slovakia Hungarian respondents from the fourth grade participated in the survey; and 40 Hungary Hungarian and 76 Slovakia Hungarian respondents from the seventh grade participated.

Regarding the place of residence, the distribution of the respondents in the two countries differs more substantially: almost twice as many respondents in Hungary were from towns than in Slovakia (towns: 62% in Hungary, 35% in Slovakia; villages: 38% in Hungary, 65% in Hungary). In terms of parents' level of education, the difference between the examined populations is also considerable: in the Hungary Hungarian group 31% of the participants' parents have completed higher education and 14% only secondary education, while in Slovakia, 14% of the parents have completed tertiary education and 35% only secondary education. The data obtained are based on students' self-reports. In both groups, the number of students who did not know the educational level of their parents is surprisingly high (43% in Hungary, and 34% in Slovakia). In addition to education, we also asked what the parents' occupations were. Since a certain job can be filled with people of various educational qualifications, it was not possible to gain more insight into our data with the help of this question. However, it can be assumed based on the indicated occupations that, overall, the majority of parents in the examined groups have completed secondary education.

# Students' attitudes toward reading and reading comprehension skills according to their self-reports

As part of the sociological questionnaire, we asked students about their own reading habits, about their parents' reading habits, about the extent to which they tend to finish a book they start to read, and also about their self-evaluation of reading comprehension skills.

Based on the data, in Table 2, it can be concluded that significant differences can be observed between the reading habits of students from the two countries. Only a fraction of overall respondents in Hungary (2%) and some respondents in Slovakia (12%) never read books.

Countering the general belief that children today do not read, most students in both groups are daily readers, and there is also a significant number who read books each week. Two thirds of the respondents from Hungary and more than half of the respondents from Slovakia are regular readers.



	4th (	Grade	7th (	Grade	Total			
	HU (N = 80)	SK (N = 44)	HU (N = 40)	SK (N = 76)	HU (N = 120)	SK (N = 120)		
Never read books	0	11	5	13	2	12		
Read books daily	70	39	51	62	61	51		
Read books 1-2 times per week	21	27	22	3	21	15		
Read books 1-2 times per month	1	5	7	11	4	8		
Read books less often	8	18	15	11	12	14		

**Table 2.** Reading habits of respondents, in percentages

There is also a difference between students' book borrowing habits. While in Hungary, more than two-thirds (67%) of all students borrow books regularly, less than one-third (27%) of them in Slovakia do so.

As far as the parents' reading habits are concerned, the parents of the respondents in Hungary read more often than those in Slovakia.

Table 3 below summarizes data on book borrowing habits and the parental reading habits. Significantly fewer respondents from Slovakia than from Hungary regularly borrow books, and parents who read daily are also proportionally fewer in Slovakia. This may also partly explain the differences in the students' reading habits, as noted above.

We asked students how often they see their parents read. The results show that half of the Hungary Hungarian students see both their mothers (56%) and fathers (44%) read on a daily basis, while proportionally fewer students from Slovakia see their parents read: less than half of the Slovakia Hungarian students see their mothers (43%) and less than a third see their fathers (28%) read daily.

Another question we asked was whether the students finish their books they start to read. Based on Table 4 below, we can state that twice as many respondents in Hungary (43%) always finish a book than in Slovakia (20%), and half as many students in Hungary (7%) never finish a book as in Slovakia (18%).

One of the most important questions of the questionnaire was the students' self-assessment of reading comprehension: students were given several statements that they were asked to evaluate on a 4-point Likert scale. Table 5 below summarizes students' self-reported comprehension skills by statement and by country.

Table 3. Book borrowing habits and parental reading habits, in percentages

	4th G	Grade	7th Grade				
	HU (N = 80)	SK (N = 44)	HU (N = 40)	SK (N = 76)			
Regularly borrow books	81	22	41	30			
Mother reads daily	71	44	41	42			
Father reads daily	64	20	24	36			



Table 4. Finishing a book, in percentages

	4th 0	Grade	7th (	Grade	Total			
	HU (N = 80)	SK (N = 44)	HU (N = 40)	HU (N = 76)	SK (N = 120)	HU (N = 120)		
Always	44	10	41	26	43	20		
Sometimes	51	71	49	56	50	61		
Never	5	19	10	18	7	18		

Table 5. Fourth graders' reading skills based on their self-evaluation, in percentages

4th grade HU <i>N</i> = 80 SK <i>N</i> = 44		Totally agree	Partially agree	Partially disagree	Totally disagree
Reading is easy; I understand	HU	53	41	6	0
everything I read.	SK	59	24	7	10
I have problems with understanding if	HU	29	21	17	33
there are difficult or unknown words in the text.	SK	42	18	20	20
I have problems with understanding if there are long sentences in the text.	ΗU	9	15	13	63
	SK	18	21	11	50
I have problems with understanding if	HU	32	14	19	35
I do not understand the topic that the text is about.	SK	44	17	17	22
Pictures help me understand the text.	ΗU	40	26	12	22
	SK	42	37	3	18
Post-text questions help me	HU	17	24	30	29
understand the text.	SK	46	23	10	21
Understanding the text is a problem; I	HU	9	5	13	73
am not good at it.	SK	13	10	18	59

The obtained data show that there is not a considerable difference between the reading comprehension skills based on the respondents' self-evaluation among the two groups. Most of the respondents in both groups (94% in Hungary, and 83% in Slovakia) agree (fully or partly) with the statement that reading is easy for them and they understand everything they read.

Reversing the question ("Understanding the text is a problem, I am not good at it."), we received similar answers: the vast majority of students (86% in Hungary, and 76% in Slovakia) state that reading comprehension does not cause any problem for them. However, the answers we received indicate a higher degree of confidence in the Hungary Hungarian group. The picture is further nuanced by the responses to further statements about the nature of comprehension. The answers to



the question about the difficulties caused by unknown words show that half of the fourth graders' group from Hungary, and 60% of the same group from Slovakia, recognize that difficult expressions or foreign words cause them problems. They also recognize that comprehension is difficult when they have little prior knowledge of the topic of the text (46% in Hungary, and 61% in Slovakia).

Similar but less confident self-esteem is exhibited in seventh graders' responses regarding their reading comprehension. Two-thirds of the seventh graders in Hungary and Slovakia fully or partially agreed with the statement that "Reading is easy; I understand everything I read". Half of the group from Hungary and two-thirds of the group from Slovakia have difficulties with difficult or unknown terms, and 42% of the group from Hungary and 59% of the group from Slovakia (all those giving fully or partially agreeing answers) encounter problems when they have little prior knowledge of the text (See Table 6).

In the rest of the study, by analyzing the results of our comprehension tests, we compare the respondents' actual reading comprehension results achieved in the test with the reading comprehension skills as estimated by the respondents.

### The results of the reading comprehension tests by age groups

The reading comprehension tests of the study included three texts in both age groups. In the first part, the respondents received a continuous narrative text of 2,500 characters each. The second

Table 6. Seventh graders' reading skills based on self-evaluation, in percentages

7th grade HU <i>N</i> = 40 SK <i>N</i> = 76		Totally agree	Partially agree	Partially disagree	Totally disagree
Reading is easy; I understand		30	47	20	3
everything I read.	SK	55	22	15	8
I have problems with understanding if	HU	32	20	26	22
there are difficult or unknown words in the text.	SK	46	24	10	20
I have problems with understanding if there are long sentences in the text.	HU	10	17	13	60
	SK	18	18	15	49
I have problems with understanding if	HU	22	20	30	28
I do not understand the topic that the text is about.	SK	31	28	6	35
Pictures help me understand the text.	HU	56	22	15	7
	SK	58	16	9	17
Post-text questions help me	HU	28	41	13	18
understand the text.	SK	44	18	5	33
Understanding the text is a problem; I	HU	10	8	25	57
am not good at it.	SK	13	11	23	53



part was a 1,500-character, continuous, expository-type text, and the third was a combined informative-type, short text of 500 characters in total, which included illustrations and tables. The three texts of the reading comprehension test included a total of 26 questions in the fourth grade and 21 questions in the seventh grade.

Differences between the results of students in Hungary vs. Slovakia in both age groups can be observed in all three texts of comprehension tests. Since the simple averaging does not reflect actual differences in group performance, the data obtained were subjected to detailed statistical analysis. An Independent Sample *T*-test was used to determine whether the results obtained were systematic or random, and a Leven test was used to evaluate the equality of variants. In the case where the *P*-value reached a significance level of less than 0.05 for the Leven test, statistical significance was evaluated by the Mann–Whitney test. Each statistical test was evaluated using the IBM SPSS Statistics 25 statistical software package.

### The fourth graders' reading comprehension test results

Below we analyze the reading comprehension test results of 80 Hungarian students in Hungary and 44 in Slovakia. The maximum score for the fourth graders' reading comprehension test was 38 points. Observing the students' performance on all three texts, students in Hungary completed the test with a 63% success rate on average, while that of the students in Slovakia was 50%.

Based on the results of the Independent Samples T-Test, at a significance level of P < 0.05, it can be stated that the group of fourth graders in Hungary performed significantly better than the group in Slovakia on all three parts of the test.

Table 7 below summarizes the detailed statistical results of the students' reading comprehension test by each text type.

The fourth-grade students in Hungary performed outstandingly well in answering the questions of the expository text, and they had more correct answers in all three parts than the students in Slovakia. The average performance of the fourth graders in Slovakia indicates that the reading comprehension skills of the examined group are weaker, regardless of the text type. The best performing Hungary Hungarian students achieved 85% of the points that could be obtained, while the best performing Slovakia Hungarian students achieved only 70% of the maximum points.

Both groups showed the weakest performance in answering the narrative part; none of the respondents achieved the maximum score. In the group in Slovakia, even those who achieved the best and the weakest results performed worse than their Hungarian contemporaries. The maximum performance of the Hungary Hungarian respondents in the case of the narrative text was 11 points out of a maximum of 13 (85% performance), with two students achieving this score, while the lowest score was 3 points (2 students). Three of the respondents in Slovakia scored the highest in that group, 9 points (69% performance), and one student did not achieve any points at all. The maximum 9 points achieved by students in Slovakia were achieved by 18 students from the sample in Hungary. For more detailed analysis, the sample was divided into four equal parts, or quartiles. A significant difference between the two groups is indicated by the fact that while the first quartile of students in Hungary was 6 points, the third quartile of students in Slovakia was 7 points.

The most common score (mode) for all three texts was higher in the group from Hungary. The respondents were the most successful in answering the questions concerning the third, informative text, with the average result of the students from Hungary being 75% of the total score, which is where most of them reached 100% of the points. In the case of this task, the





Table 7. Fourth graders' reading comprehension test results

N = 80 (HU), N = 44 (SK)	Narrative text			Expository text				Informational text					
55 (, 1 1.1 (6.1.)		HU		SK		HU		SK		HU		SK	
Maximum score		1	3		14		4		1:		i		
Median (overall score in %)	7	54%	5	38%	9	64%	8	57%	8,5	77%	7	63%	
Mode (students in %)	7	24%	5	25%	11	20%	8	20%	9	24%	7	25%	
Mode as a percentage of the total score	54%			38%	7	8%		57%	8	2%		63%	
Average	7.03		5.41		9.27		7.36		8.27		6.95		
Average as a percentage of the total score	54%		41%		66%		52%		75%		48%		
First quartile	6		4		8		6		7		5.25		
Third quartile		9	7		11		9		10		9		
Dispersion		8	10		11		11		7		11		
Standard deviation	:	1.81	2.19		2.07		2.29		1.84		2.46		
Most points achieved (as a percentage of the total score)	11	(85%)	9 (69%)		14 (100%)		12 (86%)		11 (100%)		11 (100%)		
Students with a maximum score (as a percentage of students)	-		-		1 (1.3%)		-		9 (11.2%)		3 (6.8%)		
Fewest points achieved (as a percentage of the total score)	3 (23%)		0		3 (21%)		1 (0.7%)		4 (36%)		1 (9%)		
Students with a minimum score	2		1		1		1		2		1		
Number of students below the minimum score of the HU group		-	4 (9%)		-		2 (4.5)		-		3 (7%)		

performance of respondents from Slovakia was the most heterogeneous: in their case, both the dispersion (scale of points obtained) and the standard deviation (average deviation from the mean) were the greatest.

An important difference between the two groups is that in the case of all three texts, at least some students from Slovakia earned the absolute minimum of the points that could be obtained. In addition, in the case of all three texts there were students from Slovakia who performed below the minimum score of students from Hungary.

### The seventh graders' reading comprehension test results

The number of respondents in the seventh grade was 40 in Hungary and 76 in Slovakia. In the reading comprehension tests, students could score a maximum of 35 points in total. Overall, the performance of students on the tests was 49% in Hungary and 40% in Slovakia. Based on a statistical analysis, at a significance level of P < 0.05, the group from Hungary performed significantly better on the first and third texts. The performance of both surveyed populations follows a similar pattern: the third task was the most difficult for them and the second one the easiest. Respondents in Hungary achieved better results by 11 percentage points for the third text, by 8 percentage points for the second text, and by 12 percentage points for the first text. The average result of the respondents in Slovakia does not reach 50% for any text.

Table 8 below illustrates the detailed statistical results of the students' comprehension test by each text type.

Table 8. Seventh graders' reading comprehension test results

N = 40 (HU), N = 76 (SK)	Narrati	e text	Exposit	ory text	Informational text		
77 – 40 (110), 17 – 70 (510)	HU	SK	HU	SK	HU	SK	
Maximum score	14		9	9		.2	
Median	8	5,5	5	4	5	4	
Median as a percentage of the total score	57%	39%	55%	44%	42%	33%	
Mode (students in %)	8	7	6	5	6	4	
Mode as a percentage of the total score	57%	50%	67%	55%	50%	33%	
Average	7.25	5.62	4.88	4.14	5.10	3.88	
Average as a percentage of the total score	52%	40%	54%	46%	43%	32%	
First quartile	5.25	3	4	2.25	3.25	2	
Third quartile	9	8	6	5.75	6.75	5	
Dispersion	14	12	9	9	12		
Standard deviation	3.19	2.91	1.74	2.43	2.41	1.97	
Most points achieved (as a percentage of the total score)	14 (100%)	12 (86%)	9 (100%)	9 (100%)	11 (92%)	10 (83%)	
Students with a maximum score (as a percentage of students)	1 (2.5%)	0	1 (2.5%)	2 (2.6%)	0	0	
Fewest points achieved (as a percentage of the total score)	1 (7.1%)	0	1 (11.0%)	0	1 (8.3%)	0	
Students with a minimum score	1 (2.5%)	2 (2.6%)	1 (2.5%)	7 (10.8%)	3 (7.5%)	2 (2.6)	



The third task, containing a combined type of text, proved to be the most difficult for the respondents from Slovakia, and none of the students reached the maximum score. The difficulty of the task is indicated by the fact that for this task the group average is the lowest as a percentage of the total score, the median value is the lowest (50% of students scored as many points or less), and the mode – the highest frequency in the line – is also the lowest for the third text. The second, expository text proved to be the easiest for some seventh graders in Slovakia, where most of the 100% results were obtained; however, the lowest score (9%) was obtained for this task as well. We can also see that in the case of the first task the performance of the respondents was the most heterogeneous: the dispersion and the standard deviation were the greatest in both groups.

A significant difference between the two groups is that among the students from Slovakia, in all three texts there is a result where only the minimum number of points was achieved; in addition, a significant percentage of the students from Slovakia performed below the minimum score of students from Hungary.

### CONCLUSION

The investigation discussed in the present paper is a pilot study in which we have used a comparative cross-sectional survey to arrive at a clearer a picture of the reading habits as well as differences between the self-assessment and the actual performance in reading comprehension of a group of Hungarian students from Hungary and from Slovakia.

In text comprehension, the Hungary Hungarian group has demonstrated significantly better reading comprehension among the fourth and the seventh graders. The weaker reading comprehension of the Slovakia groups has been indicated not only by the lower group average but also by the fact that more students did not achieve the results of the worst-performing respondents of the corresponding group from Hungary. The standard deviation of the results of the fourth graders in Hungary is smaller in the case of all three texts than the standard deviation of the results of the Slovakia group, which indicates a more balanced reading comprehension performance of the former group.

The average comprehension performance of seventh graders lags behind the average performance of the fourth graders' group in both group averages, and the difficulty of accurately interpreting more demanding texts chosen for seventh graders is well illustrated by the greater standard deviation of performance. While the fourth-grade groups performed more evenly, the seventh graders showed strong stratification in reading comprehension, and this finding applies to both the Hungary and Slovakia Hungarian groups. This shows that education does not help those with poorer reading comprehension to catch up, and that there is a growing gap in performance between those who perform well and those who perform poorly.

Analyzing the students' performance by text types, it is clear that the interpretation of the narrative text proved to be the most difficult for both age groups; more precisely, it was the interpretation of the implicit information in the text that presented the most challenges. However, the better reading comprehension of the groups from Hungary was also reflected in the higher proportion of correct answers to the questions about the narrative texts.

The reading comprehension data were compared with students' self-evaluation of their own comprehension. Both the Hungary group and the Slovakia group—as well as two thirds of both



age groups—consider their own comprehension to be good, with reading comprehension not causing them any problems in their own estimation. However, the actual comprehension performance of the groups shows that students do not recognize problems in their reading comprehension. This fact is worrying for the older age group, as children aged 13–14 come across many more texts as well as more difficult texts than the lower grade age group. Most members of the studied group do not recognize that the interpretation of texts and working with the text can cause problems. An analysis of further judgments about reading comprehension provides nuance for the statements made so far: half of the students recognize that foreign expressions or texts dealing with an unknown topic can cause them problems. The data on the analyzed statements indicate the need for teachers to process texts in many ways and in detail with students in class, to pay special attention to the interpretation of words and phrases unfamiliar to students, and to develop cognitive schemas.

The answers to the questions on reading habits show – based on the overall results of the students – that the home environment affects the quality of reading comprehension, both negatively and positively. The group from Hungary displays more positive reading habits: they read more often overall and more of the respondents finish their books than do their peers in Slovakia. The reading patterns of respondents from Hungary at home are also more favorable than those of respondents from Slovakia: the former see their parents read more often than the latter. Positive reading habits can partly explain the achievement of groups from Hungary in reading comprehension.

The present analysis is based on data from the pilot part of a comprehensive study. The data so far, with the help of a detailed statistical analysis, have made it possible to obtain a detailed picture of the text comprehension of the two age groups living in the two countries and the factors influencing their comprehension.

Further research is needed to prove, clarify, or possibly refute the outlined trends. However, the results so far demonstrate the need to examine the reading comprehension skills of the two age groups in a comprehensive way, taking many factors into account, in order to present a continuing emphasis on the importance of reading comprehension and also to achieve actual development with an accurate diagnosis.

- 1. The 4-point Likert scale does not allow for neutral responses, and our goal with using it was to get the students to take a position.
- 2. In the case of the second text, due to the low statistical significance of the Leven test (*P* < 0.05), the obtained data had to be evaluated using the Mann-Whitney test. Based on this, it can be stated that there was no statistically significant difference between the two groups of seventh grade students in the second part of the reading comprehension test.

### **ACKNOWLEDGEMENTS**

The research on which the study is based was conducted within the framework of the APVV-17-0071 project and part of the project VEGA 1/0170/18 "Hungarian Minority Language Variety in Slovakia". This work was also supported by the Collegium Talentum 2020 Programme of Hungary.



## **REFERENCES**

- IEA, TIMSS and PIRLS International Study Center: PIRLS 2016 international results in reading. Retrieved from http://timssandpirls.bc.edu/pirls2016/international-results/pirls/student-achievement/pirls-achievement-results/. Date of access: July 5, 2020.
- OECD (2019). PISA 2018 Results Combined Executive Summaries Volume I, II & III. OECD 2019. Retrieved from https://www.oecd.org/pisa/Combined\_Executive\_Summaries\_PISA\_2018.pdf. Date of access: July 10, 2020.

